Data Standard Report Template

Data Standard Report for

1. Introduction: *General Information about the standard (For more information see WO-IM-2003-125 attachment 2: Guidance for Managing BLM Data Standards: How to Adopt, Implement, and Maintain Data Standards, pages 17-20)*

This proposed standard is for a national data layer of Land Use Planning Boundaries. This set of boundaries is to be accessible from a central location for all BLM spatial data users. Individual states and field offices may down load copies of the data for use on websites but the central data set will be the official dataset.

Description of Standard *(type of data being covered; whether spatial or non-spatial; topic areas covered; general information of value to those using the standard)*

This document describes the data model and proposed data standard for the Land Use Planning Boundaries geospatial dataset. The Land Use Planning Boundary information will exist within the Land Use Planning Boundary feature dataset.

The proposed data model for the National geospatial dataset of Land Use Planning Boundaries is described below. The model is actually a simple model because the data is to be stored as arcs and polygons reflecting the technology of the ESRI Geodatabase. The attribute data that it will need is minimal as the data are relatively simple polygons. The item listed as the Primary Key in the 'lup_poly' table will serve as the unique national identifier that will allow connection to other planning data.

There are two tables (features) shown in this group. The first represents the arc features that will make up the polygons. These arcs will have the feature level metadata attributes shown assigned to them. The second table shows the polygon features that will actually represent the land use planning area boundaries. These two feature classes will make up the spatial feature data set.

Status of Data Collection (e.g. complete, on-going)	On-Going	**Source of Data**	Various Planning Efforts	**Date of Data**	On-going

Spatial Data? (If so, answer the following questions)	**Source of Data** (e.g. DLG's (100k, 24k), 24k Quad, digitized 24k Quad, DRG, DOQ's, CFF's, GPS (resource, survey grade), private, survey)	Various			
	Status of Data Collection? (e.g. complete, on-going)	On-Going	**Scale of Data** (e.g 7.5', 1:100k)	Various	
	Data in Digital Format (yes/no)?	Most	**If so, what format?** (e.g. Arc, ADS/MOSS, GPS, AutoCad)	ESRI formats- Shapefiles, Coverages, and Geodatabases	
	Is there data to be digitized?	No	**If so, what format is source in?** (e.g paper, Mylar)		

Affected Groups (who is effected, who should care)	All BLM employees, particularly Planners
Sponsor (business of sponsor)	WO-210, Planning Group

2. Data Category*: How this standard fits into/supports the Bureau Enterprise Architecture.*	
That is, what data subject area does this fall into? (i.e. Accounts, Administrative Interests, Assessments, Budgets, Cases, Correspondence, Cultural Interests, Documents, Environmental Interests, Facility Interests, Guidance, Hazards, Human Resource Information, Legal Entities, Library Information, Local Community Interests, Locations, Managed Records, Obligations, Plans, Projects, Rights Interests, Training Information)	This data falls into the data subject are of Plans. The standard is for the geospatial data set defining the planning area boundaries. All information contained within a plan will relate to those boundaries.

3. Data Steward Identification: *Who is/are the data steward(s); Always includes Lead Data Steward; Multiple data stewards may be involved in each office if standard addresses more than one topic area (e.g. birds and mammals); if another agency has the recognized lead for all or part of the data, include lead for that agency;*

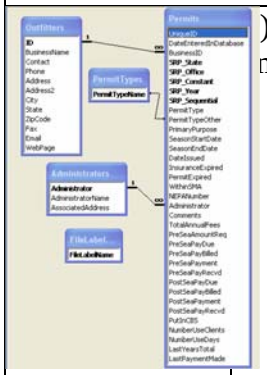
Office	**Role**	**Name**	**Contact Information**
WO-210	Lead Data Steward	Leonard Gore,Jr.	Leonard_Gore@blm.gov 202-452-5064 x3064
WO-210	Planning Group Manager	Deb Rawhouser	Deborah_Rawhouser@blm.gov 202-452-0354
WO-210	Asst. Planning Group Mgr	Chuck Otto	Chuck_Otto@blm.gov 202-785-6592 x3592

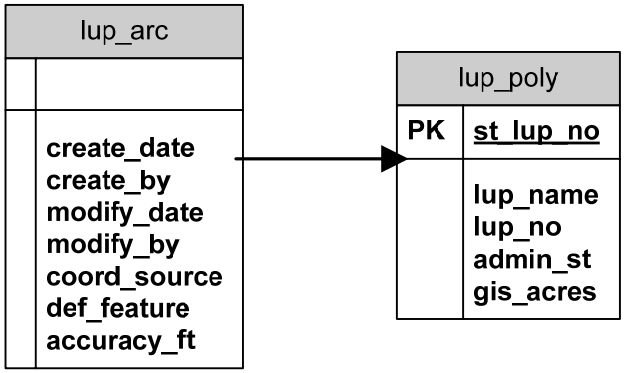
4. Data Set Characteristics *Identifies characteristics of data set as a whole*	
Overall Security: Identify security level (e.g. public/ non-public) If non-public state why	Public, Privileges: Read – public, Create – national data steward, Update – national/state data steward, Delete – national data steward.
Who has create, read, update, and/or delete privileges	Designated GIS and Planning personnel from within each state will have Create, Update and/or delete privileges. Either at the State Office or Field Office level as determined by the individual state offices. Everyone within BLM should have read privileges.

Data Collection & Maintenance Protocols: data collection and maintenance procedures that would apply	a) Accuracy Requirements: what level is required? *(If spatial, include scale and spatial accuracy)*	Best available data for spatial- documented with FGDC compliant metadata. Meet National mapping standards, a scale 24K, 15 minute quad, 100K, in that order.
	b) Collection & Input Protocols: what are approved methods?	Input by authorized persons only, using ArcGIS software. Document the source in the metadata.
	c) Update Procedures: On what basis are updates completed (e.g. township basis, case file basis); how often; by when?	When Land Use Planning Boundaries are updated to meet planning needs- updates or revisions, the data should be updated.
Data Quality: measures that will be applied to the data	a) Transaction level data quality: how will the review of data quality take place during data entry	This data is considered non-transactional, due to its static nature.
	b) Monitoring level data quality: what systematic review of data quality will take place and how will it be done?	The data will be reviewed at the time of each plan revision or amendment.
Relationship to Other Standards: Identify any other data standards (or applications) that are related; these can include national, state, local, or other agencies/organizations; identify data element that would tie them together (e.g. RIPS by allotment number)		Currently there are no direct relationships to any applications. The data standards are related to the standards currently under development for the Grazing Pastures and Allotments and the National Landscape Conservation System (NLCS) Boundaries. These boundaries are all artificial boundaries used as administrative boundaries by the BLM for management purposes.

5. Data Model Characteristics: *Each data standard is to be supported by a data model which includes entities and relationships between entities*

a) **Schema** – a graphical depiction of logical data showing entities (tables) and data elements (fields); show they relate to each other (may use attachment)





b) Entity Descriptions: places, persons, things, or concepts described in the data set (aka tables)

Notes: Data Element Names - must adhere to WO IM-2004-60 Attachment 3: Data Element Naming Conventions

Data Element Definition - avoid using data element name to describe; make clear, complete and free of jargon; include whether this makes it non-public or not, if there is a data steward for this particular element give name

Data Type/Field Size – e.g. Char(12) or Text(12) or Decimal(5,2)

Domain codes and definitions – if has codes, list and define them or refer to authoritative source where they can be found (e.g. Yes, No or list of weed codes)

Entity/Data element security – Include in definition if different from security for whole dataset (e.g. all other data is releasable except Social Security Number)

Entity Name	lup_arc
Entity Description	The arc features used to define the polygon features are described below. These arc attributes serve as feature level metadata information. Some of these items will be system generated and will not require any input effort by the users. The others have Domain values with appropriate definitions. The last three attributes fully describe the data collection method along with a description of the expected spatial accuracy. The last three attributes have intentionally been separated out to remove having any 'complex' or 'smart' attributes that carry more than a single piece of information.
Data Elements	

ATTRIBUTE NAME	GIS NAME	DATA DEFINITION	REQUIREMENT
CREATED DATE	create_date	Datetime	Feature level metadata. Required. Generated.
CREATED BY NAME	create_by	Varchar(30)	Feature level metadata. Required. Generated.
MODIFIED DATE	modify_date	Datetime	Feature level metadata. Required. Generated.
MODIFIED BY NAME	modify_by	Varchar(30)	Feature level metadata. Required. Generated.
COORDINATE SOURCE CODE	Coord_source	Varchar(5)	Feature level metadata. Required.
DEFINING FEATURE CODE	def_feature	Varchar(15)	Feature level metadata. Required.
ACCURACY MEASUREMENT IN FEET	accuracy_ft	Small Integer(4)	Feature level metadata. Required

1. Created Date

This is a system generated attribute. As a new feature is added to the system its creation date will be collected and maintained. The date will be in FGDC standard format of YYYYMMDD.

2. Created By

This is a system generated attribute. As a new feature is added to the system the userid of the person creating the feature will be collected and maintained. The userid will be the persons BLM login id.

3. Modified Date

This is a system generated attribute. As a feature is edited or modified while in the system its modification date will be collected and maintained. The date will be in FGDC standard format of YYYYMMDD.

4. Modified By

This is a system generated attribute. As a feature is edited or modified while in the system userid of the person modifying the data will be collected and maintained. The userid will be the persons BLM login id.

5. Coordinate Source Code

The Coordinate Source Code represents a compilation of state adopted source codes. This table contains those codes that would most likely be used in the determination of source codes for the Pastures dataset. This list may seem incomplete to many as the previous lists were often a combination of information that attempted to define both source and some inferred measure of accuracy. For example there were formerly multiple 'GPS' and DLG sources with their expected spatial accuracy. Those accuracies have been moved to the 'Accuracy Measurement table.

Attribute Domain Assignment: dom_lup_coord_source Default value: UNK

Allowable Codes**:**

coord_source	Definition
MAP	Manuscripted lines. Includes hand drawing onto paper or mylar map base and capturing with a digitizing tablet and on-screen digitizing using DRG
IMG	DOQ or other imagery backdrops at any scale
GPS	Lines obtained from a Global Positioning System device not using survey methods.
DLG	Lines duplicated or buffered from (1:24K or 1:100K scale) USGS Digital Line Graph derived data including GIS themes such as BLM Streams or transportation.
CFF	Lines duplicated or buffered from Cartographic Feature Files (USFS).
GCD	Lines snapped to Geographic Coordinate Database points.
DEM	Digital Elevation Model (30m or better accuracy) used for creation of contours.
NHD	USGS National Hydrologic Dataset (NHD) 1:24K or 1:100K
SRV	Survey methods were used to define the line feature. This normally requires using COGO or Survey Manager to input the data.
UNK	Unknown source (default value)

6. Defining Feature Description

The following table defines the feature types from which the arcs are derived to create the land use polygon boundaries. This information describes the physical or mapping feature that makes up the land use planning boundary.

Attribute Domain Assignment: dom_lup_def_feature

Default value: UNK

Allowable Codes:

def_feature	Definition
RIM	Natural topographic barrier to the movement of livestock
FENCE	Constructed fence
LAKE	The shoreline of any manmade or natural standing water
ROUTE	Road centerlines (Using the name of the FAMS Feature Class)
STREAM_RBANK	Downstream right bank of stream, manmade or natural moving water (indicates that the stream is within the downstream left pasture)
STREAM_LBANK	Downstream left bank of stream, manmade or natural moving water (indicates that the stream is within the downstream right pasture)
STREAM_CENTER	Centerline of stream, manmade or natural moving water
PARCEL	Legal line such as ownership or section line
PT-TO-PT	Boundary is not a legal or geographic feature
ROUTE_OFFSET	Boundary is offset from a route
UNK	Defining feature unknown

7. Accuracy Measurement

The Accuracy Measurement defines how close, in feet, the actual ground location is to the spatial depiction in GIS. This value would typically be determined by the map accuracy value if a USGS map were used to define the boundary, or by the expected spatial accuracy achieved through the use of GPS. The value may also be the result of a measurement of that accuracy as is noted in the *The National Standard for Spatial Data Accuracy (NSSDA)*[1] which is a "data usability" standard issued by the Federal Geographic Data Committee (FGDC).

A value of -1 indicates that the accuracy is unknown; or that no reliable estimate can be made. An example of a feature that has an accuracy of +/- 40 feet would have an entry of '40'.

1 Federal Geographic Data Committee. 1998. Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy, FGDC-STD-007.3-1998

Attribute Domain Assignment: none
Default value: '-1'

Small Integer, Required field

Entity Name	lup_poly
Entity Description	The land use planning polygon features are defined below. These land use planning boundary attributes may be duplicated in other data sets but are considered minimum information for unique feature identification and cartographic purposes. Domain values are used when appropriate
Data Elements	

ATTRIBUTE NAME	GIS NAME	DATA DEFINITION	REQUIREMENT
LAND USE PLANNING BOUNDARY NAME	lup_name	50 characters	Required
LAND USE PLANNING BOUNDARY NUMBER	lup_no	3 characters	Required
LAND USE PLANNING BOUNDARY STATE CODE	admin_st	2 characters	Required
ADMINISTRATIVE STATE LAND USE PLANNING BOUNDARY NUMBER	st_lup_no	5 characters	Required
GIS ACRES	gis_acres	16.6 numeric	Required

1. Land Use Planning Boundary Name

The word by which the plan is known and set apart from other plans. Example, Kemmerer RMP, is a type of acceptable name designation. This value may or may not be unique at the national level. This is a mandatory attribute.

2. Land Use Planning Boundary Number

A three digit numeric identifier that is an arbitrary serial identifier, these three digits are an artificial, sequential, user-assigned number which distinguishes a unique occurrence of a BLM Land Use Plan within each administrative state. These numbers should run sequentially in the following manner – 001, 002, 003, …, 010, etc.. This is a mandatory attribute.

3. Land Use Planning Boundary Type

The status of a BLM Land Use Plan- a plan is either in Revision status or Amendment status. The actual code for lup_type is to be entered as;

R - for Revision or,
A - for Amendment

This is a mandatory attribute.

4. Land Use Planning Boundary Amendment Type

When the Land Use Planning Boundary Type is A (Amendment) of a BLM Land Use Plan, there are two possible sub-types of Amendments. One is an Environmental Assessment and the other is an Environmental Impact Statement

EA- for Environmental Assessment or
EIS- for Environmental Impact Statement

This is attribute is mandatory only when the Land Use Planning Boundary Type is A (Amendment).

5. Land Use Planning Boundary State Code

A two character code which indicates the administrative state responsible for the land use plan. The two digit code are state character codes from FIPS 5-2, CODES FOR THE IDENTIFICATION OF THE STATES, THE DISTRICT OF COLUMBIA AND THE OUTLYING AREAS OF THE UNITED STATES, AND ASSOCIATED AREAS (http://www.itl.nist.gov/fipspubs/fip5-2.htm). These are the same two letter postal codes that most users are already familiar with and thus makes it easier for them to enter the correct information.

6. Land Use Planning Boundary Year

The year that either a Record of Decision was signed for an Existing Plan or the year that scoping started for a Land Use Plan In Progress.

7. Administrative State Land Use Planning Boundary Number

This attribute is a concatenation of the Administrative State Code and the Land Use Planning Boundary Number. This field is present for the sole purpose of providing a unique national code.

8. GIS Acres

This is a calculated value of area in units of acres based on the area field created by default within the ESRI Polygon data structure. For the purposes of a 'national data layer', the data are to be stored in geographic coordinates which do not correspond to ground values. This requires that there be a standard method for calculating this attribute.

The method used for this data is as follows. The data are projected into a standard projection such as the ESRI default Albers projection for the continental United States. "US Albers NAD 1983" Once the data are projected, then a calculation of "SHAPE_Area (square meters) * 0.0002471044 = acres" is applied to the existing 'area' field that is default area created by the ESRI software resulting in the field (Attribute) 'SHAPE_Area'. Please note that the figure used in this calculation is the factor for converting the US Survey Foot value for the length of a meter as opposed to the International Standard for converting meters and feet.

A tool will be developed to ensure there is a consistent transformation of geographic coordinates to projected coordinates and an acreage calculation. A standard conversion constant will be used to ensure consistent acreage computations. The tool and all supporting information are contained in Appendix A of this document.

6. Business Rules: Rules under which data is used and modified (See WO-IM 2003 247 Attachment 1: Business Rules Collection)	
Rule Name	
Rule source (e.g. handbook, guidance, directive)	
Source Description (brief	

explanation of where the rule comes from)						
Rule Statement (what is the rule?)						
Type of Rule (e.g. Business Term, Standard, Guideline) Business Term –*word/phrase that has specific meaning for the business,* Standard –*establishes allowed use or combination of multiple, formally defined business processes and information requirements, and quality criteria including mathematical calculations, inferences, use of Business Terms with other Business Terms, and dynamic aspects of the business, specifies restrictions on results that actions can produce, conditions on actions, or imposes limits; Also specifies rules about format and content of things the business is interested in,* Guideline – *instructions, practices, recommendations that are not always mandatory but desired*						
Is it Mandatory, Optional or Not Applicable because it is a Business Definition?		Automation Restriction? (Yes, No – *caused by the limits of the technology used*)				
How is Rule Implemented? (Manual Process, Computer Application, Not Applicable)						
Name of Application or Manual Process						
Rule Status (Active, Inactive)		Rule Effective Dates (rules kept for historical purposes)	Beginning Date		Ending Date	

Add Rules as needed

7. Other Material: Any other supporting material that aids in the understanding or use of the data standard; include specific geographic, organizational, or applicability constraints for non-national standards